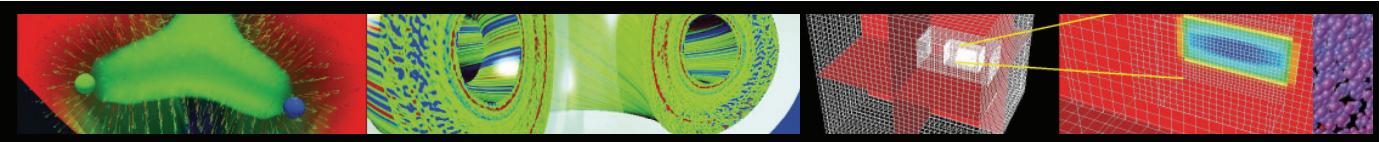




SciDAC

Scientific Discovery through Advanced Computing



SciDAC Tutorials Day

Each year in conjunction with the annual SciDAC conference, the SciDAC Outreach Center sponsors a day of tutorials on SciDAC-supported research. Partners from academia and industry help to shape and run the tutorials. In 2007 MIT co-sponsored Tutorials Day in Boston. In 2008 the tutorials were co-sponsored by Microsoft Research and held at their Redmond, Washington campus.

The tutorials span a broad range of subjects in scientific computing, HPC software, scientific data management, and new algorithms. They focus on bringing the benefits of DOE investment in SciDAC to new researchers in academia and industry. Students and researchers from academia, industry, and research laboratories—sometimes from as far away as Hong Kong and Japan—meet for a day of presentations and discussions on wide-ranging research problems and topics for which SciDAC Centers and Institutes have developed solutions.

Participants learn how to parallelize their current computational efforts or to improve them by implementing the latest

computing algorithms and methods. Many tutorials are hands-on, and some provide direct access to large-scale parallel computers. Tutorials are a bidirectional outreach activity for SciDAC researchers. They bring the DOE's SciDAC investments to new audiences and also provide feedback and new ideas for their application to SciDAC researchers.

Samples of past tutorials include:

- Visualization and Data Analysis with VisTrails
- Introduction to Scientific Workflow Management and the Kepler System
- Porting and Scaling Applications on BlueGene/P
- Advanced CompuTational Software (ACTS) Collection Tutorials
- Advanced Visualization and Data Analysis with the VisIt Visualization System
- ADIOS: The ADaptable IO System
- An Introduction to the Cray XT4 for Application Scientists



Rebecca Hartman-Baker points out the differences between quad core and dual core nodes on the Cray XT4.

Participant Feedback Shapes Tutorial Directions

“I’m just getting into this and didn’t really have any expectations, but they definitely illuminated things that I’m looking to do in the future. I was very happy with it.”

—*Josh Jacobs,
University of Washington*

“The VisTrails tutorial was wonderful. I had been playing with VisTrails, and I wanted to learn how to add new features on my own, and I got that, so it was great.”

—*Patrick O’Leary,
Desert Research Institute*

“I think the SciDAC program is very useful. Participation is very useful for us.”

—*Kenji Ono, RIKEN*

About SciDAC Outreach

The SciDAC Outreach Center is a clearinghouse of SciDAC activities and resources and provides information and services in support of SciDAC objectives, including outreach, training, and research. The Outreach Center also organizes the annual Tutorials Day and provides software, data, and computational help to those in *SciDAC* as well as those interested in working with SciDAC.

David Skinner, SciDAC Outreach P.I., sums up the strategy saying, “For SciDAC Tutorials Day we leverage the expertise gathered for the main annual meeting. We ask some of the SciDAC researchers to stick around an extra day to present to a mostly local audience of academic and industry researchers. This has worked well the past two years—we had around 100 attendees. We also tailor content to our registrants’ stated interests.”



Hank Childs gives an introduction to the VisIt visualization system.

